

REMARKS/ARGUMENTS

Claims 30-38 were pending in the present application. In this amendment, Applicant submits amendments to claims 30, 37 and 38. No claims are canceled and no claims are added. Thus, following this amendment, claims 30-38 will remain pending.

In the Office Action, the Examiner rejected claims 30-38 under the judicially created doctrine of obviousness notwithstanding the prior submission of a terminal disclaimer, apparently due to the signer of the terminal disclaimer not being the attorney of record in the case. A signed Power of Attorney form is submitted herewith. To avoid any further rejection on this issue, enclosed is a newly signed terminal disclaimer. Applicant submits that the terminal disclaimer should now be sufficient to overcome the double patenting rejection.

In the Office Action, the Examiner also rejected claims 30-36 under 35 USC §102(b) as being anticipated by Kvant (a previously known Soviet/Russian orbital vehicle) with the Examiner citing to references as evidence of the features of Kvant, namely references to Kvant-1 and Kvant-2 at http://russianspaceweb.com/mir_kvant.html and <http://www.spaceflight.nasa.gov/history/shuttle-mir/multimedia/diagrams/shut-mir.jpg>. Applicant concedes that the Kvant was publicly known more than one year prior to Applicant's earliest priority date, but does not take a position on whether the cited web pages accurately describe features of the Kvant vehicle.

In the Office Action, the Examiner also rejected claims 37-38 under 35 USC §103(a) as being obvious over Kvant in view of Okamoto (U.S. Patent No. 5,005,786).

In response to the Office Action, Applicant submits amended claims that more clearly distinguish the invention from the Kvant vehicle. The claims, as amended, are allowable over Kvant because each of the claims recites at least one element not found or suggested by the Kvant vehicle.

For example, amended claim 30 recites at least two docking ports, configured to allow the supply canister to be driven by one of the docking elements into position for docking to the other of the docking elements wherein the supply canister is adapted to be propelled by a

propulsion system present in orbit independent of the launch of the supply canister., which is not the case with Kvant, as Kvant uses its own propulsion system.

Prior art cargo systems for space platforms typically were launched into space and then delivered to an orbital platform as a single unit, i.e., the cargo vehicle itself contains a propulsion system. The Kvant vehicle is no exception. In other cases, such as the Space Shuttle, the cargo vehicle is mounted within a system that contains a propulsion system. In either case, the cargo vehicle is physically attached at launch to a propulsion system that is designed to deliver the cargo vehicle directly to an orbital platform and there is considerable overhead in moving the propulsion systems into initial orbit. Unless the propulsion system is contained within a shell capable of re-entry into the Earth's atmosphere (as is the case with the Space Shuttle), each such propulsion system is used only once and discarded, making cargo delivery using a non-intermodal system extremely expensive.

In the specific instance of the Kvant vehicle, it requires a propulsion module physically connected at launch. This propulsion module weighs about 8 tons. The other structures of Kvant weigh about 8 tons, and the Proton rocket used to launch the Kvant vehicle has an orbital payload capability of about 20 tons, leaving only 4 tons (about 20% of the Kvant weight) available for Kvant payload.

By contrast, as explained in Applicant's specification, a supply canister can be launched without an orbital propulsion system. In one example described therein, a supply canister can rely on the upper stage of the launch system to deliver the cargo system to a point in space, rather than to an orbital platform. Since this upper stage does not need to be capable of delivering the cargo system to an orbital platform, it can be significantly less capable and thus less expensive than propulsion systems that can deliver cargo to an orbital platform. The upper stage need only deliver the supply canister to an intermediate orbit where a second vehicle can then transport the supply canister to the orbital platform, al without the expense and effort of launching propulsion systems for that effect. The second vehicle can be reused and need not include a shell for reentry. One aspect of the claimed invention that makes this possible is the claimed docking ports and other recited elements.

As a result, the described supply canister might have 50% of its launch mass allocated to payload. With a Proton rocket, that means that 10 tons of materiel can be launched per rocket compared with 4 tons for the Kvant, in part because the supply canister has no propulsion module.

Additionally, Applicant submits that the cited references fail to show the two docking ports as claimed.

In view of the above, Applicant submits that claim 30 is allowable over the cited prior art and the rejection of claim 30 and claims 31-36 dependent therefrom should be withdrawn.

Claim 37 is allowable because it recites elements not disclosed or suggested by the cited prior art. For example, claim 37 recites that at least one docking element providing propulsion to the supply canister is an orbital element present in orbit independent of the launch of the supply canister. Kvant provides its own propulsion system that is present in orbit only in connection with the launch of the Kvant vehicle, namely its attached propulsion system. This does not disclose or suggest that a supply canister could be launched that would rely on orbital elements already present in orbit for its propulsion. Okamoto does not make up for what Kvant lacks.

Therefore, claim 37 is allowable and the rejection of claim 37 should be withdrawn. Claim 38 is allowable for at least those same reasons and the rejection of claim 38 should also be withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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